



RRB GROUP–D VERY IMP

Laws of Indices

Same Base

1. Multiplying:

$a^m \times a^n = a^{m+n}$

$2^3 \times 2^4 = 2^{3+4} = 2^7$

2. Dividing:

$a^m \div a^n = a^{m-n}$

$4^5 \div 4^3 = 4^{5-3} = 4^2$

Same Index

3. Multiplying:

$a^n \times b^n = (ab)^n$

$2^3 \times 5^3 = (2 \times 5)^3 = 10^3$

4. Dividing: $(b \neq 0)$

$a^n \div b^n = (a \div b)^n$

$6^5 \div 3^5 = (6 \div 3)^5 = 2^5$

Mean, Median, Mode and Range

Mean

Add all the numbers then divide by the amount of numbers

9, 3, 1, 8, 3, 6

$9 + 3 + 1 + 8 + 3 + 6 = 30$

$30 \div 6 = 5$

The mean is 5

Median

Order the set of numbers, the median is the middle number

9, 3, 1, 8, 3, 6

1, 3, 3, 6, 8, 9

The median is 4.5

Mode

The most common number

9, 3, 1, 8, 3, 6

The mode is 3

Range

The difference between the highest number and lowest number

9, 3, 1, 8, 3, 6

$9 - 1 = 8$

The range is 8